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shaped anther reaches its place in the *sinus* between the lobes of the compound stigma. This movement is soon followed by that of the remaining alternate stamens until all the six recesses of the stigma are occupied. The rise of the stamens is not rapid or simultaneous, nor does any particular order seem to prevail as regards the individual stamens of this set. The interval between the erection of the first and last of the six seems to vary from 8 to 30 hours. In nearly every instance, the anther cells burst as soon as, or before the upward movement begins.

The last stamen of the first set of six now having arisen, an interval elapses varying from ten to nineteen hours, when the remaining alternate stamens begin in like manner to open and slowly arise in succession, and the anthers of these come to rest in contact with the projecting lobes of the stigma. The stamens of this series are slightly shorter than the others, and have sometimes been called the external ones. The interval of time between the first and last of this series is usually not more than twelve hours. The stamens, having now all reached their new position, present a view not less symmetrical than their first appearance, the projecting horns, or filaments, produced above the anthers being all bent forwards towards the centre of the stigma.

Under the ideas which formerly prevailed upon the subject of self-fertilization of flowers, the statement of Linnæus, though needing qualification, is so illustrative that Darwin ought certainly to have given it poetic diction in the "Loves of the Plants." But when we look for special adaptation of parts for the office assigned by Linnæus, we find the anthers of both series of stamens *not introrse*, but extrorse—that is, opening outwards and downwards, directly *from* the stigma. Moreover, in almost all cases, the bursting of the cell and the protrusion of the pollen is fully completed before the stamen reaches its erect position. By the time, however, that the anthers of the first series have reached their places *between* the lobes of the stigma, they have become so swollen and so covered with pollen that a few grains almost inevitably come into contact with the stigmatic surfaces. But while slowly ascending to this position, and after reaching it, they certainly are so placed that the visit of an insect could hardly fail to carry away much more of the pollen than can reach the stigma by anther contact. Yet, the flower of this plant is so near the ground, and so often hidden, in fact, by dead leaves, that flying insects could hardly reach it; nor have I detected any visits from these, or from insects of other habits. But I trust that what I have here recorded will lead to further observation and research on this and kindred points. JOHN H. REDFIELD.

PHILADELPHIA, *May* 22, 1873.

§ 32. **Party-colored Iris.**—I saw, yesterday, a curious specimen of the ordinary Iris of cultivation (*Iris Germanica*). The colors —blue and white—were exactly divided upon it. The owner said that his white flowers grew on one side of his garden and the blue ones on the other, and they had never crossed before. Is not this the result of insect agency? You will notice that each petal or sepal that is colored is divided into two tints by the mid-rib.

PROVIDENCE, *June* 5th. W. W. BAILEY.

§ 33. Apocynum—No. 5.—I hope some of those who meet with *A. androsæmifolium* this summer will make a microscopical examination of the buds to determine, if possible, the origin of the glands. Schleiden, in his *Botanik*, 1849, has already pointed out the true stigmatic portion of the style, of which he gives a drawing, and also of the glands, *p.* 494. He does not, however, seem to recognize the dual nature of the latter. In his view the stamen is attached to the style by a secretion of viscine from a tuft of hairs at the top of the filament, and, if I rightly apprehend him, the diaphragm is ~~but~~ the extension of the epidermis of the upper part of the style, upon which epidermis the gland lies, so that he recognizes the gland as distinct from the styles, and, indeed, supposes that, in Asclepiadaceæ, the glands originally pertained to the anthers, *ibid.* It will thus be seen that his observations in part anticipate my own. I did not meet with his notice of this plant till after I had published my notes on the same subject.

Schleiden also recognizes that the flower cannot fertilize itself, though he seems not to have known the *modus operandi* Dr. Darwin, in the Botanic Garden, a work which might almost be called a necessary introduction to the writings of his distinguished grandson, gives an outside report of the manner in which the anthers entrap flies, *Vol. II., p.* 241, as does also Rafinesque in his Medical Botany. I understand that Mr. C. F. Wheeler of Hubbardston, Mich., was fortunate enough last summer frequently to find insects, including some *Lepidoptera*, entrapped by this plant. W. H. L.

§ 34. New Localities.—Last spring we found the Trailing Arbutus (**Epigæa repens**) in the wood bordering the southern shore of the mouth of the Croton River, being the first specimens found in this region. DR. C. J. FISHER.

SING SING.

Some years ago Prof. Thurber found **Fedia olitoria**, Vahl, at St. Ronan's Well, near Flushing.—Mr. Miller discovered last year at Wading River, in a barley field, a patch of *Matricaria inodora*, L.—I have found this season **Ranunculus multifidus**, Pursh with **Amianthium**, west of Hackensack, and **Cynthia Virginica**, Don, near Huguenot Station on the Staten Island R. R. W. H. L.

LILIUM, L.—**L. Philadelphicum**, L.; N. Y.; Closter, common; *Austin;* Westchester Co.; Bergen Point; Chatham, N. J.; —**L. Canadense**, L.; Hoboken, *Torr. Cat.;* Closter, common, *Austin;* Chatham, N. J.; Glen Cove, *Coles;* Westchester Co. —**L. superbum**, L.; Glen Cove, *Coles;* Astoria; Staten Island; Carlstadt; New Durham, and Orange Co. &c, not near Closter, *Austin.*

ERYTHRONIUM, L.—**E. Americanm** Smith; common; N. Y.

ORNITHOGALUM, Tourn.—**O. umbellatum**, L.; Striker's Bay, *Ruger;* Inwood, *Le Roy;* Closter and Tappan, *Austin;* Yonkers, *Pooley;* abundant on Long Island, in the neighborhood of Newtown, Flatbush, &c., and on Staten Island.